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Egypt

Dear Dr. Craissati,

RE: Report on a Consultancy Service: "Assessment of Water Users Association in Egypt"

Please find enclosed herewith a report on the outcome of the services I rendered in the implementation of the project entitled "Assessment of Water Users Association in Egypt" by the Desert Development Center (DDC) the American University in Cairo.

I have tried to follow the terms of the reference for the assignment in the compilation of this report.

I would like to express my appreciation of the opportunity provide to me by IDRC to carry out this assignment. The research team I worked with at DDC were very cooperative and exceptionally hospitable for which I am deeply indebted.

Please let me know if you have any comments on the report.

With kind regards,

Shibru Tedla
Coordinator – PLaW Programme

Cc: Prof. Abdel Ghaffar M. Ahmed
Executive Secretary

Dr. Mohamed Sabbah
Director, DDC, Egypt

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

**ASSESSMENT OF WATER USERS ASSOCIATIONS IN EGYPT
CONSULTANCY SERVICE REPORT**

(15 SEPTEMBER TO 5 OCTOBER 2000)

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EXECUTIVE SUMMARY

INTRODUCTION

1. The research project for which consultancy support was provided, entitled “Assessment of Water Users Associations (WUAs) in Egypt”, is supported by IDRC and implemented by the Desert Development Center (DDC) of the American University in Cairo (AUC).
2. The objective of the Project is evaluation of existing WUAs in order to propose effective strategies for their promotion.
3. The major activities of the research project entitled “Assessment of Water Users Association in Egypt” include secondary data collection (through literature review); primary data collection (through qualitative and quantitative methods); data processing and analysis; and sharing the research findings with relevant organizations; and finally formulation of a strategy to facilitate sustainability of Water Users Association in Egypt.

RESEARCH ACTIVITIES VISA VIS RESEARCH OBJECTIVES

4. Secondary data collection was carried out mainly to facilitate the designing of appropriate questionnaires for primary data collection. A lot of literature has been reviewed, however, the information made available through literature review is not effectively utilized in the formulation of questionnaires.
5. Earlier reviews of WUAs in Egypt such as that of Hvidt (1996) has indicated where to look for success and failure factors; the limitation then being the limited period that had elapsed between the establishment of IIP and the period of the review. The fact that the present project is being carried out many years after the initiation of IIP should provide ample opportunity to the researchers

to arrive at more definitive conclusions as to the importance and sustainability of WUAs in Egypt. This is not very evident.

6. The questionnaires designated for collecting primary data could have been formatted in such a way that they take full advantage of the literature review in identifying important issues in WUAs. They could also have been more focused and complementary to one another.
7. The analysis of the information generated by carrying out the defined project activities, including the administration of questionnaires designed for the purpose, need shed light on the factors that most limit or help good performance of WUAs from the socio-cultural, economic, legal and political perspective. This does not come out clearly in the present study.
8. From the limited analysis of findings made available, it is impossible to identify independent impacts of the two major components of IIP, i.e. technical aspect (physical improvement of the irrigation system) and the organizational aspect (establishment of WUAs).
9. Whether or not the establishment of WUAs has taken full advantages of traditional forms of farmer participation (i.e. *munawaba* and *Tarof* system of leadership, the *Haq al-Arab*-etc.) is not apparent; there is need to present this aspect in greater detail.
10. In WUAs Profile Presentation, the narrative description therein should bring out qualitative aspects of WUAs as follows; cases in which arbitration by WUAs took place to resolve a resource use conflict; measures taken by WUAs to strengthen their associations, measure taken towards equitable distribution of irrigation water

THE FORMAT AND CONTENT OF THE INTERIM REPORTS

Format

11. There is a lot of room for improvement of the packaging of information e.g. in presenting identifying stakeholders of WUAs; in relating milestones in the establishment of WUAs; in the consistency of spelling of names of places and persons; and in the format of citation of the list of references.

Content

12. The interim reports are rich in content, however, the presentation will benefit from editing; checking for consistency of factual presentations, checking what was planned to be presented and what is presented (tables); matching table headings and contents of tables; and putting correct units in tables.
13. The reports could have been made more informative through inclusion of a map showing locations where research activities are carried out; identifying exactly how many WUAs are operational brief presentations of outcome of meetings of the research team; as well as field visitations by the team could have enriched the content of the reports.

REPORTING AND EXCHANGE DISSEMINATION WORKSHOP

14. It is suggested that information dissemination workshops strategize to address to types of audience:
 - (a) a group mainly made up of high government officials and donors who may not be able to sit in the workshop all day;
 - (b) a second group mainly made up of officials with technical/scientific orientation and the research team and their associates.
15. To the first group, presentation of an overview of the whole research undertaking should suffice. Emphasis here should be given to sharing of essential experiences, e.g. issues that need policy attention, donor attention, etc. This presentation could follow the welcome addresses. The presentation could be designed in such a way that it will be over by coffee break. The officials and the donors, who may not want to stay long can leave after the coffee break and the workshop would have achieved its objectives, as it relates to such officials.
16. The presentations in the second and subsequent sessions could be as detailed as required. They need also be handled by sectoral experts, e.g. irrigation engineers, agricultural economists, social scientists, gender experts, etc. Methodology of research and research findings and analysis should be presented at one go for the sake of better appreciation of the processes involved. Based on this line of thinking a revision of the

workshop programme was suggested. The suggestion was found acceptable, except that the presentation of a general overview could not be handled by one lead researcher alone. It is strongly believed that any one of the research team should be able to give a bird's eye view of the project at any one time to any audience. Such level of appreciation will help the sharing of the research experience with all relevant stakeholders.

Participation in Symposia

17. Three members of the research team have participated in international symposia and presented preliminary findings of the research project.

INTEGRATED INPUT BY MEMBERS OF THE RESEARCH TEAM

18. There is room for better integration of the research exercise through regular formal meetings of the research team and also through presentation of preliminary research findings in 'inhouse' seminars/meetings.

THE WAY FORWARD

19. It may be advisable to carryout limited additional field studies in areas where there are good signs of success of WAUs, on one hand, and in areas where there are signs of unsustainability of WUAs on the other hand. This will provide an opportunity to identity what is to be built upon and what is to avoided and what corrective measures should be taken.

ANNEX

20. The Annex comprises of a selected working paper prepared during the course of the consultancy service; suggested format for the Third Interim Report; a format for recording research team meetings; a format for recording field visitations and field activities; terms of reference of the consultant; and itinerary of the consultant.

Acknowledgment

OSSREA appreciates the confidence bestowed on it by the International Development Research Centre (IDRC) and the Desert Development Center (DDC) of the American University in Cairo to carry out the present assignment. The Consultant assigned for OSSREA to carry out the consultancy service highly appreciated the support provided to him by personnel of the DDC, especially, Dr. Mohamed Sabbah the Director of the Institute. All members of research team went beyond the call of duty to facilitate the carrying out of the assignment as well as, to make the consultants stay at DDC as comfortable as possible. And the Consultant expresses his deep appreciation to all concerned for the conducive environment within which he operated at the DDC.

ACRONYMS/ABBREVIATIONS

APRP	-	Agricultural Policy Reform Project
AUC	-	American University in Cairo
DDC	-	Desert Development Center
EWUMP	-	Egypt Waters Use and Management Project
FWMP	-	Fayoum Water Management Project
IAS	-	Irrigation Advisory Service
IDRC	-	International Development Research Centre
IFAD	-	International Fund for Agricultural Development
IIP	-	Irrigation Improvement Project
ISAWIP	-	Integrated Soil and Water Improvement Project
LBF	-	Local Board Federation
LBW	-	Local Water Board
MOA	-	Ministry of Agricultural
MOALR	-	Ministry of Agricultural and Land Reclamation
MPWWR	-	Ministry of Public Works and Water Resources
NLSAP	-	New Lands Agricultural Service Project
NGO	-	Non-Governmental Organization
PRAs	-	Participatory Rural Appraisals
RIIP	-	Regional Irrigation Improvement Project
USAID	-	United States Agency for International Development
WPP	-	Water Policy Programme
WUAs	-	Water Users Associations

1. INTRODUCTION

The research project for which consultancy support was provided, entitled **Assessment of Water Users Associations in Egypt**, is supported by the International Development Research Centre (IDRC) and implemented by the Desert Development Center (DDC) of the American University in Cairo (AUC). The project was approved in 1999 and had been running for about one and half years when the consultancy support was provided. By this time, the implementation agency had carried out a substantial portion of project activities and had provided two interim reports (First Semi-Annual Report, May 1st - October 31st 1999; Second Semi-Annual Report, November 1, 1999 – April 30, 2000)

The objectives of the project are as follows.

General Objective: evaluate existing WUAs in both old and newly reclaimed lands in order to propose effective strategies for their promotion.

Specific Objectives:

Objective 1: Identify and survey existing WUAs and review any studies or evaluations conducted on their performance, efficiency and sustainability.

Objective 2: Identify and rate the factors that most limit or help the good performance of WUAs, attending to the following perspectives: a) Socio-economic, b) economic, c) legal, and d) political.

Objective 3: Analyze and assess the attitude knowledge and skills of farmers as determinants of their social actions and capabilities in managing irrigation water.

Objective 4: Identify and assess the involvement of women in social organizations and decisions for the management and water.

Objective 5: Based on findings, on analysis and on what is possible locally, define viable strategies to promote the establishment and sustainability of well-performing WUAs.

Objective 6: Start the process of disseminating and communicating the research results and recommendations to relevant stakeholders and, as needed, mobilize necessary follow up efforts.

In order to achieve these objectives the following major activities are envisaged.

Phase I Secondary Data Collection and Initial Design

Literature Review (secondary data gathering) to help the appreciation of what is in place and to facilitate specific identification of issues that ought to be addressed in the research activities. Secondary data included international, regional and national literature, donor and development project reports as well as documents, including by-laws from ministries and other government organization

Phase II Primary data collection and field research

Field based studies to generate primary data.

Primary data was generated through qualitative and quantitative research methods. Quantitative methods included a sample survey, and qualitative methods included case studies (profiles of WUAs) group discussions and participatory rural appraisals (PRAs)

Phase III Data processing and data analysis

The findings were analysed at different levels and these included:

The National Level: the analysis dealt with the irrigation system at the national level, the socio- cultural, legal and political context, the environment within which WUAs operate, among other issue. The analysis depended both on primary and secondary data.

The Governorate Level: this aspect dealt mainly with the structure of WUAs (different types) and organizational models. Analysis at this level also depended on primary as well as secondary data.

The Village Level: mainly primary data was used at this level, and the data was generated primarily through interaction with members of respective WUAs, farm holders (both males and females).

Phase IV Reporting and Exchange

This is the final phase of the project where the final project document comprising all aspects of the research will be produced and research outcome dissemination strategy will be elaborated.

At present, the final stages of phase (III) are approached /reached and the necessary interim reports are submitted to IDRC. At the end of October the Third Interim Report is expected to be submitted.

The tasks of the consultant are:

- a) To support the research team in revisiting their interim reports in view of meeting the objectives of the project;
- b) To support the team in the integrated input of the different disciplinary strength of the research team;

- c) To provide the team with support in conceptualizing their dissemination workshop, planned for October 2nd 2000, and to assist them in the preparation of the dissemination documents.

The consultant produced a series of working papers beginning 17 September 2000. This was done for the benefit of the research team so as to enable them address issues raised herein in their subsequent activities e.g. the forthcoming workshop – 1st dissemination workshop. It was, therefore, not necessarily to wait for the consultant's report which was not expected till the end of October 2000. Since all the issues raised in these series of working papers (seven in all) are included as part of the comments made in this report, there was no need to include all of them in this report, some are appended.

The consultant has made several suggestion that will facilitate integration of the teams activities, such as regular meetings, holding of seminars, etc. Each member is expected to have a full appreciation of the project *in toto* and the activities therein.

The consultant prepared the program for the workshop (2nd October 2000) and most of his proposals were found acceptable by the research team.

2. RESEARCH ACTIVITIES VIS A VIS RESEARCH OBJECTIVES (BASED ON INTERIM REPORTS)

2.1 Secondary Data collection and Initial Design

Secondary data collection was carried out mainly to facilitate initial design of primary data collection. Secondary data was collected through literature review. The essence of the process is outlined below.

- a) Literature review reveals that WUAs exist in many countries, and that their origins are variable (bottom-up, top-down).
- b) One gets an idea of what factors are likely to lead to success /failure and these factors issues may not have equal relevance elsewhere/everywhere.
- c) One may wish to know whether or not these factors issues have relevance to the setting in Egypt.
- d) With these ideas and more, one goes to the field and carries out the following activities :
 - He/she raises these issues with farmers officials, etc. and finds out whether or not these issue are of relevance.
 - Through repeated discussions with farmers, the relevance of these factors issues in Egypt becomes clearer; the researcher notes that some are of relevance, while others not so.
 - He/She wants to generate more information around the relevant issues so that he/she gets more reliable information and be able to arrive at a more affirmative conclusion.
- e) Then, researcher designs questionnaires in such a way that the questionnaires address as many issues of relevance as possible .
- f) The researcher will also pursue further interviews along the same line of thinking.
- g) The researcher may want to experience first hand (the relevance of these factors) by carrying out specific and representative case studies.

However the present designers of questionnaires have apparently not taken full advantage of the information available in the literature; or at least that is not very evident in the questionnaires designed.

I would like to emphasize the importance of literature review by citing an example in order to indicate how the present research could build upon existing information, which could subsequently be taken into account when formulating questionnaires. Such a process will facilitate generation of information that may lead to more definitive

conclusions. The example chosen is Hvidt (1996).^{*} Hvidt (1996) has reached at important conclusions relevant to objective one of this project primarily, but also to objectives two and three, respectively, to a lesser extent.

If the irrigation agency is capable of supplying continuous flow in the main canals, there seems to be little reason to invest time and effort in creating strong WUAs. This conclusion is reached because respondents with strong WUAs reported far fewer deviations (i.e. from planned irrigation) than respondents with weak organizations; mesqas at branch canals with no-operational continuous flow, thus indicating the need for strong WUAs for reliability of flow. On the other hand, for farmers at branch canals with continuous flow fully operational, no differences are reported in relation to organization strength, indicating that there is no need for strong WUAs. The conclusion is when branch canal water supply is adequate, reliable and fair, the strength of WUAs does not influence water control (water distribution).

However, Hvidt (1996) argues that it is difficult, if not impossible, for the irrigation agency to keep continuous flow in operation without any interruptions and, thus, that WUAs organizational strength is in fact of utmost importance for improving water control. WUAs as organizations have effect on the adequacy situation: for example sudden interruptions to branch canal water flows have been counteracted by WUAs operating the (pumps) for longer hours (eg. 20hrs) when the water returned. Farmers, in some instances, have shared the inadequate supply by giving each farmer may be two-thirds of his water needs, thereby providing water for more farmers, albeit limited.

Many research findings indicate that the *mesqa* system improvements have made way for a more flexible distribution of the irrigation water as a result of increased farmer water control.

Hvidt (1996) remarked that the research in which he was engaged was carried out only two years after IIP implementation. The farming system was not yet developed as to make WUAs organizational strength crucial to the operation of the *mesqa* system. In addition the *mesqa* system was not yet diversified towards higher yielding and more moisture sensitive crops. As a result the level of specialization of functions within WUAs was not yet developed to the point where such organizations have become of supreme importance.

The fact that the present research project is being carried out many years after the initiation of IIP should provide ample opportunity to the researchers to arrive at more definitive conclusion as to the importance and sustainability of WUAs in Egypt. This is not very evident.

The literature highlights the importance of Water Users Associations and factors that affect them. It clearly states that farmers' participation in the socio-technical process of WUAs will lead to:

- a) Better/greater crop production;
- b) Improved water distribution (equity);

^{*} Hvidt, M. (1996). Improving Irrigation System Performance in Egypt: First Experience with the WUA Approach. *Water Resources Development*, Vol. 12 (3) pp.261-276).

- c) Reduction in conflict;
- d) Greater resource mobilization;
- e) Sustained system performance.

Factors affecting the context of participation include a) historical, b) economical, c) physical and d) socio-cultural factors. The importance of participation and the factors that affect participation are dealt with in detail.

Factors that may limit participation:

- a) Lack of government commitment to adopting participatory approach;
- b) Unwillingness of project officials to give up controls over project activities and decisions;
- c) Lack of incentives and skills among project staff;
- d) Limited capacity of local-level organizations and insufficient investment in community capacity building;
- e) Delayed participation;
- f) Mistrust between government and local communities.

Factors that may enhance participation:

- a) A relatively autonomous implementation agency not hindered by the need to coordinate with a large number of agencies;
- b) A client oriented implementation agency;
- c) Commitment on the part of beneficiaries;
- d) Well functioning beneficiaries' organization.

Participation components of public sector to the success of WUAs include:

- a) Full access to information on policy issues and development plans;
- b) Freedom of association;
- c) Regular meetings.

Beneficiary Participation:

- a) The single most important factor in determining overall quality of project implementation;
- b) Participation should be incorporated at all stages of project cycle;
- c) Participation not so important in determining quality of macro-project design; here involvement of other stakeholders is more important.

Important Institutional Arrangements for sustainable rural water services:

- a) Beneficiary demand and client orientation are the main criteria guiding policy reform, project design and institutional incentives;
- b) Creation of a social organization to manage and sustain the physical infrastructure is central to the strategy;
- c) The forms, intensity and the details of participating are not standardized but are allowed to vary depending on the objectives and the local context;

- d) Local participation and sustainability of services are the key evaluation criteria.

Performance Indicators:

- a) Technical impact (Water availability, equitable distribution, expansion in irrigated areas, efficient delivery of water and improved upkeep of the system;
- b) Productivity impact (increased yields, intensified cropping patterns and improved farm income);
- c) Financial impact (reduced irrigation costs and increased cost recovery);
- d) Environmental and other non-tangible impacts (changes in water quality, water logging and salinity, groundwater tables and other externalities that result from farmers' participation).

General observations on WUA:

- a) WUA are stronger if they are built upon existing social capital or patterns of cooperation.
- b) Groups are likely to be stronger if they are relatively homogeneous in terms of background and assets.
- c) There is no single optimal size for WUA.
- d) The structure of and roles within WUAs depend on the degree of commercialization and market penetration.
- e) Although the range of WUA organizations shows great variability, two broad models of WUAs can be identified. The first, of Asian model typically relies on indirect participation by all members. The second, or American model is a more specialized organization with role differentiation. The specialization, together with less reliance on face to face interaction, allows for larger organizational size. Memberships is more likely to be based on hydraulic boundaries, and the organizations focus on irrigation rather than on multiple activities.
- f) In any type of WUA, the benefits to farmers must outweigh the costs of participation.
- g) Organized farmers in WUAs can manage advanced technology and higher levels of irrigation systems.
- h) A supportive policy and legal environment is crucial to the sustainability of WUAs.
- i) Where agencies retain operation and maintenance responsibilities at higher levels of the system; the need to carry out these roles effectively so that farmers will feel it is worthwhile for WUAs to carry out their functions at lower levels, is evident.
- j) A facilitating legal framework is critical to give WUAs the ability to deal effectively with external groups, operate bank accounts and undertake other activities.
- k) The state has essential continuing role in ensuring the long-run sustainability of WUAs.

Important issues for consideration in the management of WUAs in Egypt.

- a) Importance of avoiding water hassles, conflicts and psychological prejudices.
- b) Establishment of storm water user's association.
- c) The rotation and schedules need among farmers need to be very well established and maintained prior to formal turnover to WUA.
- d) Quality training of IAS (Irrigation Advisory Service) Engineers, field agents, district engineers, water user leaders and council members is required for assuring sustainable WUAs.
- e) WUAs are not using the hourly system for charging pumping fees and do not have adequate financial and pumping records with reserve funds in a bank account. This needs special training and assistance in making changes.
- f) The higher turnover of the IAS due to promotion transfers and other reasons need to be overviewed by the policy makers

Important findings in this section were not fully taken advantage of in the design of questionnaires that were used for primary data collection.

2.2 Primary Data Collection and Field Research

The research team noted that previous studies emphasized technical aspects and lacked socio-economic components. The present investigation was to focus on identifying factors influencing the good performance of WUAs and their importance rated in terms of socio-cultural, economic, legal and political factors and to look in depth into farmers attitudes, knowledge and skills as well as women's role. These are considered crucial elements affecting the efficiency of WUAs. In order to appreciate how effectively these issues have been addressed by the research team, we need to visit the objectives of the research

Objectives of "Assessment of Water Users Association in Egypt" General: Evaluation of existing WUA to propose effective strategies for their promotion.

Specific objectives and activities to achieve objectives.

- 2.2.1 Identify and survey existing WUA and review any studies or evaluations conducted on their performance, efficiency and sustainability.

It is apparent that the literature review did not reveal much in terms of studies and evaluation on existing WUAs. Whatever is revealed is not dealt with in a coherent manner.

- 2.2.2 Identify and rate the factors that most limit or help the good performance of WUAs, attending to the following perspectives.
 - a) Socio-cultural
 - b) Economic
 - c) Legal
 - d) Political

This is a very important objectives and it is of prime importance for the formulation of strategies leading to sustainable management of WUAs, through promotion of the good practices and avoidance of bad practices. Activities that are relevant to the achievement of this objective include literature review, discussions, case studies, interviews (questionnaire administration).

The questionnaires designed by the team for the purpose include:

A. Agriculture and Irrigation

- A.1 Demographic
- A.2 Socio-economic status of the household
- A.3 Social participation and local organizations
- A.4 Labour Force in Irrigation
- A.5 Irrigation system

The information generated through the questionnaires mentioned above needs to be complemented with information generated through the following additional (complementary) questionnaires, for articulation of the economic aspects in particular.

B. Agriculture and Irrigation (Economic component)

- B.1 Cropping patterns and agricultural rotation.
- B.2 Human labor costs for each cultivated crop in the farms.
- B.3 Animal and Mechanical labor costs for each cultivated crop in the farm.
- B.4 Cost of production operations for each cultivated crop in the farm.

The analysis of the information generated by carrying out define the project activities, including the administration of these questionnaires, need shed light on factors that most limit or help good performance of WUAs from the socio-cultural, economic, legal and political perspectives. This is not very evident.

- 2.2.3 Analyze and assess the activities, knowledge and skills of farmers as determinants of their social actions and capabilities in managing irrigation water.

There is a paucity of focused questionnaires, which are designed to generate information that will ultimately shed light on the issues that are being addressed. It is true that there are several questionnaires which are relevant to the issues under discussion, such as the following entitled (heading):

- Attitudes towards the WUAs
- Joining WUAs;
- Demographic data;
- Irrigation problems before and after irrigation development;
- Socio-economic status;

- Data concerning selected WUAs, etc.

However, these questionnaires are not focused enough to address the issues at hand effectively.

2.2.4 Identify and assess the involvement of Women in social organizations and decisions for the management of water.

The questionnaire entitled “women’s questionnaire” addresses this issue. It would have been possible to enrich the information generated if one designed questionnaires similar to the following:

- a) Because of the new opportunity provided by WUAs; did women carry out activities which they would not normally carry out?
- b) Did they acquire a more respectable status in the community because of WUAs? etc.
- c) Did the new confidence acquired (if any) lead them to venture into activities, which they would not dare to do otherwise?
- d) What advantages did women get by being members of WUAs Boards?

2.2.5 Based on findings, on analysis and what is possible locally, define viable strategies to promote the establishment and sustainability of well performing WUAs.

2.2.6 Start the process of disseminating and communicating the research results and recommendations to relevant stakeholders and, as needed, mobilize necessary follow-up efforts.

Both 2.2.5 and 2.2.6 depend on what happened in the form of activities in 2.2.1-2.2.4 and the generated and its subsequent analysis.

- Questionnaires that will bring out factors that enhance/deter WUAs performance are not apparent. Questionnaires whose responses lend to making suggestions of improvement/ or avoidance of problems, could have been designed. Such questionnaires could have been included in questionnaire entitled “Joining the WUAs”. Questions such as the following may have been useful.
- If WUAs are to be re-organized how would like the reorganization steps (process) to be?; and several similar questions.

Is it possible to have parameters which could help segregate the advantages of having WUAs and the technical aspects of IIP?

Many factors, which were considered important in the review section (see Second Interim Report: pages 8 and 9) were not addressed through questionnaires.

2.2.7 Examples of Questionnaires that were not apparent:

- a. Questionnaires administered to engineers were not obvious. The contents of these questionnaires were identified in page 10 of the Second Interim Report (i.e. proceeded by bullets covering procedures of current irrigation management; field workers capacity building; social, organizational and technical aspects of field work; training programmes for technical staff to develop the required skills, attitudes...). If this aspect is handled through discussion, this ought to be made clear.
- b. Those which could indicate/reveal changes in the norms and attitudes, which in turn could be used as criteria for assessing the performance of the WUAs.
- c. Questionnaires which may reveal the shortcomings of the top-down approach, which apparently is the *modus operandi* in Egypt.

Data Processing and Data Analysis

Draft documents containing preliminary analysis of findings were made available by Professor Ragga El-Amir and Dr. Ali Ibrahim (economic aspect), Professor Mohamed H. Nawar (social aspect), Dr. Azza T. Al-Berdari (gender aspect), and Professor Samira Ismail (technical aspect). Presentation on the same were also made at the first dissemination workshop. However, it is too early to make comments/suggestions for improvement at this stage. All the same one could suggest what the content of the analytic section should look like.

A cursory look into the preliminary analysis indicates that identification of independent impacts of the two major components of IIP (i.e. technical aspect-physical improvement the irrigation system and social/or organizational aspect – WUAs) is not evident. It will be extremely difficult to segregate the respective impact from the data generated at present.

It is also hoped that further analysis will shed light on the following issues, among others.

Are WUAs addressing the needs of farmers? This has to be seen in light of success stories and failures elsewhere. Since the involvement of farmers in the partial management of irrigation systems through WUAs has proved to be successful (e.g. Spain, Indonesia, the Philippines, Sri Lanka), Egypt has implemented the WUA approach of irrigation water management forcefully. On the other hand the Pakistan on-farm water management project has shown less success; apparently, because the system was imposed on the farmers. What exactly is the status quo of WUAs in Egypt.

The analysis and results should reveal where WUAs associations stand. There are some indicators of failure and success. Indications of failure: because findings indicate

that members of WUAs in some areas meet very rarely; and the only occasions that bring farmers to meetings is when the irrigation system ceases to function and urgent action is needed. The problems that need action are cases of stealing (machines, parts) and to resolve conflicts. Indication of success: discussions with researchers revealed that some farmers who had initially refused to be members of WUAs requested to be members, when they realized the advantages of being a member of the WUAs. Some even offered to pay for being allowed to join WUAs. This issue has to be dealt with in detail.

One major components of IIP is organization of operational WUAs in all IIP areas whose tasks include: scheduling of water delivery on *mesqas*, performance of maintenance and resolution of disputes, increasing communication links between farmers and government officials. The analysis and the findings should give some definitive statements on the different functions of WUAs.

Whether or not the WUAs have taken advantage of the traditional forms of farmer participation during their establishment is not apparent. It is known that traditional forms of participation and conflict resolution i.e. *munawaba* and *Tarof* systems of leadership and water allocation at *mesqa* level, the *Saqia* ring for collective pumping of water, the *Haq al-Arab* which is a traditional Islamic legal system for maintaining peace and resolving conflict do exist. The questionnaires designed do not seem to address this strategy; i.e. building upon what is available in the cultural setting.

It will be informative if traditional forms of participation are dealt with in the analysis.

It will also be useful if the analysis deals with the process of WUAs establishment and capacity building of WUAs by taking the following issues, among others; into consideration, respectively.

(a) – Phases of establishment

IIP has defined a seven-phase strategy to establish WUAs i.e. (i) entry, (ii) initial organization (iii) preparation for *mesqa* improvement, (iv) participation in *mesqa* improvement, (v) regular WUA operations, (vi) WUA federation and monitoring, and (vii) evaluation.

How were WUAs established? What are their functions at present? etc.

(b) Capacity Building WUAs

As part of the WUA formation process four courses are conducted by the IAS: basic course in WUA formation and responsibilities, a course in financial accounting, a course in maintenance, and a course in on farm water management.

Have the trainings been carried out? How many people participated in the training? and when?

The suggestion for the analysis section are made without losing site of the objectives of the project. Most issues raised above are relevant to the success/failure of UWAs; and that apparently is the Center piece of the research endeavor.

2.3 Data Processing and Data Analysis

Profile of selected WUAs

Profiles of some selected WUAs are expected to reveal what may not be normally captured through questionnaires.

A narrative description should bring out qualitative aspects e.g.:

- a) Cases in which arbitration by WUAs took place to resolve a resource use conflict.
- b) Description of measures (punitive or otherwise) that were taken by WUAs on other members who failed to abide by the normal codes of operation.
- c) Measures taken by WUAs members in order to strengthen their association (i.e. contribution, in kind or in cash, etc.)
- d) Examples of measures taken towards equitable distribution of water at tail end reaches of canals.

3. THE FORMAT AND CONTENT OF THE INTERIM REPORTS

3.1 Format

Apparently, there is a lot of information contained in the reports, however, it is not easily accessible. Accessibility will improve greatly if the information is appropriately packaged.

Format in the main body of Text

Examples are given to indicate rooms for improvement

Example one:

Stakeholders of WUAs are mentioned in many parts of the text, however, the roles they play in WUAs are not made clear. It is suggested that the stakeholders be listed and brief explanations of their roles be made in one go –preferably in the form of a table. (suggested table format is annexed, Annex 7.2).

Text presentation/classification

Example Two:

Establishment of WUAs in Egypt

Several milestones in the establishment of WUAs in Egypt are mentioned throughout the literature review section of the two interim-reports. The information could be made more accessible if it is presented at one go; a table is suggested (see Annex 7.2).

Non- substantive issues

There are some, not so important issues, but addressing them will improve the quality of presentation (especially to an outside reader). These are primarily spellings of names, differently spelt in different section of the interim reports and the project document.

Example, in 2nd Interim Report (some in the 1st Interim Report as well).

Mesqua Vs *mesqa*; Bani Swulf Vs Beni Suef; Beheira Vs Behera;
Kafrel Shickh Vs Kafr Al Sheeikh; etc. In project document Prof.
Mohamed Al-Ameer; in 1st Interim Report Prof. Mohamed R.El Amir.

The whole text presentation (in both reports) could be substantially improved if serious thought is given to thorough edition; both formative and substantive.

Reference/Bibliography

The reference/ bibliography should be part of the main body of text; not part of the annex. The citation of literature should follow one of the accepted formats of reference citation. Once a format is adopted, then all the reference citations should be governed by the selected format.

3.2 Content

3.2.1 Cross-checking of text for consistency

The interim-reports are rich in content and the research team need be given credit for that. However, the presentation will benefit from editorial work; checking for consistency of factual presentations. The errors may not be substantive, but all the same they will reflect on the quality of the report.

Example (i) non-consistent statement

The First Interim-report (page 34) states that, "The Egyptian – Dutch Fayoum Water Management Project (FWMP) started in 1993..."

The Second Interim Report (Page 38) states "The Fayoum Water Management Project (FWMP) started in 1992".

Example (ii) mismatch in text and tables

Data-base set-up/Tables – (all refer to the 2nd Interim Report)

There is an apparent mismatch between the checklist of data-base set-up (page 16 of Second Interim Report) and the tables represented in pages 87 to 104 (Second Interim Report).

Tables which are mentioned in the checklist of data-base (page 16 of 2nd Interim Report) set-up for which tables are not designed.

- a) Number of WUAs founders by gender and governorate.
- b) Distribution of WUAs by source of water and governorate.
- c) Distribution of WUAs by type of irrigation system and governorate.
- d) Distribution of WUAs by present activities and governorate.
- e) Distribution of WUAs by design and governorate.
- f) Distribution of WUAs by registration and governorate.
- g) Distribution of WUAs by *mesqas* length and governorate.

Tables which are not mentioned in the checklist but appear in the text.

Tables that appear on pages 102 and 103 (Second Interim Report) do not appear in the checklist on page 16 (Second Interim Report).

Table headings:

In the checklist (page 12 of 2nd Interim Report) distribution of WUA, by *mesqa* length and governorate”; table heading “Distribution of surveyed WUAs of the data base by area served by WUA and governorate” (page 20). It is presumed the two are the same, if not this item will be part of the mismatch presented above.

In checklist (page 12 of 2nd Interim Report) “distribution of WUAs key design and Governorate”; table heading “distribution of the sample WUAs according to Mesqua type of design by governorate” (page 101). This header will be clearer if it stated as follows: “Distribution of WUAs by design and Governorate”.

The headings of the tables are not precise; eg. Table in P. 90 (2nd Interim Report) “Distribution of surveyed WUAs data base by area served by WUAs and Governorate”. At first reading it is difficult to understand what the table is all about.

A mismatch between table header and table content (Table in p 102, 2nd Interim Report). The table header should read “Gender Composition of WUAs in different governorates “not” “Distribution of the sample WUAs; According to Mesqua Type of Design by Governorate”.

Absence of clarity of presentation is also made obvious in some tables e.g. Tables refer to area without stating the measure of the area i.e. ‘feddans’ (page 103 2nd Interim Report).

3.2.2 Absence of required informative.

The inclusion of a map showing locations where the research activities are being carried out will make the document more accessible. It is stated in the report that at the time of the survey, there were 2800 WUAs at various stages of registration covering 1.7% of the agricultural land. However, there is no clear presentation of how many operational WUAs exist in Egypt at the time of the survey. It is suggested that the facts be presented in the form of the table (suggestion appended – Annex 7.2).

The aspects and the research activities that bring the team members together need to be reported clearly. The first two interim reports do not appear to have given justice to the activities that were presumably carried out within the period of reporting.

Succinct presentation on the meetings of research team members (when, who, what...) and a similar presentation on the field visitations (when, where, what, who ...) are missing. Such presentation need also be complemented with a more detailed information package, preferably in the form of tables (see Annex 7.3 and 7.4).

A format which is suggested for the report to be submitted by the end of October, 2000, with clear table of contents, is appeared (Appendix 7.2).

4. REPORTING AND EXCHANGE

4.1 The First Information (Findings) Dissemination workshop

There was an apparent lack of appreciation of who the audience in the workshop were to be. The audience obviously determines the packaging of the information for delivery. Usually, such workshops as the one under discussion, have mixed audiences (a) one group mainly made up of high government officials and donors who may not be able to sit in the workshop all day. They may also not be interested in the detailed technicalities of the presentation. (b) The second group may likely be officials with technical/scientific orientation as well as the research staff and their associates. The later group will be interested on the technical aspects of the research, and normally they have the time to sit through the sessions of workshop. The set-up as outlined above necessitated that the workshop presentation be packaged at two levels, i.e.

- a) A general presentation giving an overview of the whole research undertaking. Emphasis here should be given to sharing essential experiences, e.g. issues that need policy attention, donor attention, etc. This presentation could follow the welcome addresses. The presentation could be designed in such a way that it will be over by coffee break. Hence, the officials and the donors, who may not want to stay long can leave and the workshop would have achieved its objectives, as it relates to such officials
- b) The second and subsequent sessions. The presentations here could be as detailed as required. They need also be handled by sectoral experts, e.g. Irrigation engineers, agricultural economists, social scientists, gender experts, etc. Methodology of research and research findings and analysis should be presented at one go for the sake of better appreciation of the processes involved. Based on this line of thinking a revision of the workshop programme was suggested. The suggestion was found acceptable, except that the presentation of a general overview could not be handled by one lead researcher alone. It is strongly believed that any one of the research team should be able to give a bird's eye view of the project at any one time to any audience. Such level of appreciation will help the sharing of the research experience with all relevant stakeholders.

The need for rapporteurs at the workshop, and tools for capturing essential proceedings of the workshop were suggested and the suggestion was found acceptable.

4.2 Participation in symposia

Three members of the research team have participated in International Symposia and presented preliminary findings of their research.

- 4.2.1 Professor Mohamed Sabbah attend "the Eighth International Symposium on Society and Resource Management; Transcending Boundaries: Natural Resource Management from Summit to Sea" where he presented a paper entitled

“Assessment of Water Users Associations in Egypt” held in Bellingham, USA (17th to 23rd June, 2000).

4.2.2 Professor Ragga El Amir attended “The Tenth World Congress of Rural–Sociology” and presented a paper entitled “Economic Assessment of the Water Users Association in Egypt” held in Rio De Janeiro, Brazil (30th July to 5th August, 2000).

4.2.3 Dr. Azza El-Bendari attended “the 63rd Annual Meeting of the Rural Sociological Society” where she presented a paper entitled “Women’s Participation in Irrigation Agriculture” held in Washington D.C., USA (13th to 17th August 2000).

5. SUGGESTION OF INTEGRATED INPUT BY MEMBERS OF THE RESEARCH TEAM

5.1 General Observation

Discussing the research project with individual members of the team gives an impression that one is dealing with many projects. This does not imply that members are not unaware of what their colleagues in the team are doing. It only suggests that there was a paucity in the number of meetings in which research issues of general interest were discussed.

There are two meetings reported in the 1st Interim Report. These were meetings of experts.

- a) First Meeting of Local Experts on Water Users’ Association in Egypt, Jul. 27 1999.
- b) Second Meeting of Foreign Experts on Water Users Association October 24, 1999.

The regular meetings of the research team do not figure out in the report. There is a need for serious integration of the research activities. Research team member meetings do provide a good forum for checking out one’s ideas, as well as for sharing of experience with other members of the team. There is a need for better synergy.

The need for improvement of coordination is also apparent in the design of questionnaires. They could have been designed in such a way that they complement one another, economic aspects addressed the gender questionnaire and vice versa. This was not common.

5.2 Suggestions for Improvement

Research Team meetings

There need to be regular meetings of the team, with minutes recorded for ease of reference. The forum for interaction thus provided will help the integration of the research activities and the subsequent outcome of the same. Such recordings also make up essential elements of institutional memory.

Seminars

There is a need for holding seminars on regular basis, strategically every six months where research findings are presented to a wider audience. These seminar could precede the writing of Interim Reports to IDRC. The presentations need not be long but issues considered important should be presented for the benefit of the audience (non-research team member) as well for the benefit of clarification research findings through an interactive process. The seminars could thus facilitate the articulation of the research reporting to IDRC. Holding of regular seminars will also enhance the research capacity of the institution as a whole.

6. THE WAY FORWARD

In light of all the comments made in the different sections of this report, it may be advisable to carry out additional, albeit limited, field studies, interviews, discussions and administration of a few questionnaires which will address the concerns raised in the comments. The study will be preferred if it is carried out where there are good signs of success and indications of failure of WUAs, the two extremes, respectively. This will provide an opportunity to identify what is to be built upon and what is to be avoided. Such information will be essential for identifying realistic strategies for sustainable management of water users associations.

Whether to carry out the recommendations or not will depend on the outcome of further analysis of the results of field studies, which are already available.

It will also be appropriate to take advantage of the research process and compile a bibliography on Water Users' Association in Egypt.

7. ANNEXES

Annex 7.1 Selected working paper prepared during the course of the consultancy service

Assessment of Water Users Associations in Egypt Preliminary Suggestions on Role of Consultant

I see my role (obviously supportive to the process) as a consultant as follows:

1. Re-visiting Report:

I could perhaps identify areas where I could help in the consolidation report to be submitted at the end of October. This will require re-visiting the earlier reports in line with the following points:

1.1 Literature Review:

Literature review is a major component of the project, and it is the component which is expected to bring out the main issues to be dealt with in the research to a more focused position, by distilling existing relevant information and through the process, providing solid information of what is on the ground.

1.2 It will shed light on factors that influence success/failure in general terms.

1.3 It will shed light on major constraints in WUA Development.

The problems /constraints could be :

- Social
- Technical
- Institutional - local level.

1.4 A more in depth analysis could identify gaps at a national level :

1.4.1 Policy

- Absence of Policy;
- Failure to implement an existing policy;
- Conflicting policies, etc.

1.4.2 Institutional Arrangements:

- Weak institutions
- Non-clear mandates of institutions;
- Overlapping responsibilities of institutions;
- Conflicting interests of institutions;

1.4.3 Programmes

- Programmes that have negatively affected communities;
- Programmes with no obvious benefit to communities;
- Not integrated programmes;

1.4.4 Projects

- Not participatory projects;
- Non fulfilled expectations;
- False hopes;
- Unpleasant communal memory, etc.

OUTPUT:

The information thus generated in the literature review is expected to provide input into the formulation of questionnaires in addition to revealing of what is on the ground.

- 1.2 Discussions with officials (government at all levels), researchers/NGO personnel, Aid agencies, etc.

OUTPUT:

- Information obtained through this process will supplement review of literature as well as feed into questionnaire formulation.
- It will also help in the prioritization of issues to be addressed in the questionnaires/research.

- 1.3 Interviews/Group Discussions / Questionnaire Administration.

1.3.1 Interviews and Group Discussions

The issues to be discussed are those identified as important issues through the literature review, as well as, through the discussions in section 1.2 above. However, there will always be a need to address issues other than those present in mind of the researcher. For example the interviewees may bring into light a dimension which may have not been obvious through the review / discussions.

OUTPUT:

- Information for qualitative analysis;
- Information for fine-tuning questionnaires;
- Input into the selection/identification of case studies;

1.3.2 Questionnaire Administration

1.3.2.1 Pre-testing

Output:

Input into Appropriate Questionnaire Formulation.

- Qualitative.
- Quantitative.

- 1.4 Case Studies / Representative Profile of WUA.

OUTPUT:

Detailed Description of selected WUAs

Detailed description of profiles will shed light on :

- The policy Framework;
- Institutional set-ups (Linkages);
- Organizational arrangements (In-house);
- Constraints at all levels

Problems:

- Social problems .
- Technical Problems.
- Institutional problems .

- Interviewees during case studies may come up with suggestions of circumventing problems, solutions to problems, etc.
- Due attention need to be given to this aspect, since this window provides ample opportunity for participation. One needs to respect farmers opinions/ideas/knowledge for building the required confidence and the development of mutual respect.

1.4.2 Evaluation of WUA

This will obviously bring into focus the success and failure stories; and what factors lead to success and what factors lead to failure :

- Performance;
- Efficiency;
- Sustainability;

(there is s need for a common understanding of these terms)

Performance : (Analysis)

- What socio-cultural settings helped performance ?
- What economic set-up/situation is conducive to good performance?
- What legal arrangements are conducive to good performance? etc.

1.5 What will the Questionnaires Address.

1.5.1 Identification of factors that impact on performance of WUA.

1.5.2 Identification of determinants of farmers' social actions e.g.

- Knowledge .
- Skills.
- Attitude, etc.

1.5.3 Identification of the role of women in WUA.

1.6 Main Output of Research.

1.6.1 Formulation of strategies for sustainable management of WUA.

1.6.2 Generation of knowledge that will be shared with others.

2. Integration of Input of the Multi-disciplinary research team.

Activities :

- Discussions with members of the research team as to how this may be carried out.
- Perhaps brainstorming the project activities in a meeting and identifying activity gaps where support could be provided may be essential.

3. Supporting the conceptualization of the 1st Workshop (dissemination)

- Programming the workshop.
- Helping in the drafting of Workshop report.

4. Mapping the Future.

- The consultant need share his ideas/vision of the WUA beyond the present IDRC supported Project.

Annex 7.2 Suggested Format for the Third Interim Report to be submitted on 31st October 2000.

**Third Semi Annual Report
(May 1st, 2000-October 31st 2000)**

Suggested Outline of the Report

Table of Contents

- (i) Executive Summary
- (ii) Acronyms Used
- (iii) List of Tables
- (iv) List of Figures
- (v) Acknowledgment

1. Introduction

- Setting the policy/legal environment (very brief statements of impact on WUAs – putting the project in legal institutional context)
- Major problems (technical, social...) associated with the traditional (non-improved) irrigation system
- Brief statements introducing the need for the project/importance of the project/importance of the project
- Summary of the project objectives
- Milestones in the project life – the present state (activity milestones). A couple of paragraphs of what have been accomplished to date in terms of activities will suffice. Any additional information can be appended.

2. Development of WUA's in Egypt and their present state

- 2.1 Traditional irrigation water utilization practices (physical structures; social aspects, etc.)
- 2.2 Milestones in WUAs Development*
- 2.3 Water Users Associations: Facts and Figures (where, when, what could be summarized in a table form)**
- 2.4 Stakeholders in WUAs (name institutions and explain the role of each eg. IAS, LBF...)+
- 2.5 The Role of Donors in WUAs' Development

* A sample table is prepared and appended to this outline

** A format is appended with this outline.

3. **Research Methodology Employed**
 - 3.1 Literature Review (Desk Work)
 - 3.2 Field Research
 - 3.2.1 Qualitative Methods
 - Major issues addressed using this methodology
 - 3.2.2 Quantitative Methods
 - The tools (questionnaire) used and the essence of each (Why)?
 - The Statistical methods employed
4. **Research Findings and Analysis**
 - 4.1 Major Research Findings
 - 4.1.1 Technical issues
 - 4.1.2 Social/Economic Issues
 - 4.1.3 Cultural/Institution/Legal Issue
 - 4.1.4 Gender Issues
 - 4.2 Analysis of Results (findings)****
 - 4.2.1 Success and failure indications of WUAs
 - Technical indicators
 - Economic and Financial Indicators
 - Social indicators
 - Legal and managerial indicators
 - 4.2.2 Factors related to success and failure of WUAs
 - Demographic variables
 - Social variables
 - Economic variables
 - Legal and managerial variables
 - Gender aspects
5. **Areas in which further analysis is pending**
 - 5.1 Technical issues
 - 5.2 Social/Economic issues
 - 5.3 Cultural/Institutional/legal issues
 - 5.4 Gender issues
6. **References and Bibliography:**
7. **Annexes**
 - 7.1 List of members of the Research Team with very brief profiles.
 - 7.1 Data-base of Water Users' Associations in Egypt.
 - 7.2 Sample description.
 - 7.3 Questionnaires used.
 - 7.4 Economic Analysis Frameworks and illustrative examples.
 - 7.5 Facts and figures related to gender.
 - 7.6 Technical irrigation systems, description and design criteria.
 - 7.7 Workshops/Meetings carried out to date and list of participants in each.
 - 7.8 Field visitations with dates, participants and summary of activities (tabular form).
 - 7.9 Research team meetings with dates, summary of deliberation and participants.

**** Background information for the analysis is available in the 1st report (pages 12-19).

+ A preliminary list of stakeholders is appended.

****Table Number of Functional WUAs in various Governorates in Egypt and the irrigation System in Place**

Suggested Format for WUAs Information Presentation

Governorate	Number of WUAs and Irrigation System they use			
	J-Section	PVC	Mixed	Total
El-Fayoum				
Bank Swuif				
El Menia				
El Sharkia				
Kafr e Sheikh				
El Nubaria				
El Beheira				
Total				

Preliminary list of stakeholders and principal actors in WUAs and their roles (there is a need to explain the roles).+

- Ministry of Public Works and Water Resources (MPWWR)
- Ministry of Agriculture (MOA)
- Ministry of Agriculture and Land Reclamation (MOALR)
- Irrigation Districts (id)
- Local Board Federation (LBF)
- Water Users' Federation (WUF)
- Local Water Board (LWB)
- Water Users' Union (WUU)
- Irrigation Advisory Service (IAS)
- IAS Field Agents
- IAS Engineers
- Water Users' Associations (WUAs)
- Irrigation Engineers
- Technical Experts
- Extension Agents
- Ministry Personnel
- Local Government Official
- Farmers, etc.

These names appear in the text frequently, there is a need to briefly explain their role in WUAs.

Milestones in the Initiation and /or Establishment of WUAs in Egypt

Year	Issues Addressed /Events
1977	The Ministry of Irrigation, the Ministry of Agriculture and the United States Agency for International Development (USAID) designed a project entitled "Egypt Water Use and Management Project" (EWUMP) in an attempt for improving Egypt's irrigation system in the old land. One critical aspect of the project was the establishment of WUAs in the project sites.
1984	A report of EWUMP recommended that farmers be involved in any irrigation improvement programme/project and emphasized that farmers should be encouraged to become involved in the management of water delivery at the <i>mesqa</i> level.
1987	A joint integrated soil and water improvement project (ISAWIP) by the Egyptian Government in collaboration with the government of Canada was put in place
1988	A Regional Irrigation Improvement Project (RIIP) was initiated in a bilateral agreement between MPWWR and USAID and a limited experimental water user organizational efforts were tested in the Menia Governorate.
1988	A bilateral agreement for the Irrigation Improvement Project (IIP) was signed between MPWWR and USAID. The Project document clearly stated that operational water users associations must be organized in all IIP areas to provide farmers' inputs during the remodeling process, to government officials, to coordinate scheduling of water on " <i>mesqas</i> ", to perform maintenance operations and resolve local disputes.
1988	Establishment of Irrigation Advisory service (IAS) was accepted as a major strategy for strengthening WUAs
1989	Field work on water users' associations begun in the fall of 1989.
1990	Zagazig IIP Directorate reported on a socio-economic study of Egypt's Irrigation Management Improvement on Saidiya Canal command, Zagazig.
1992	The basic rationale for IAS as an organization unit with the Ministry of Public works and water resources was defined.
1992	The Egyptian-Dutch Fayoum Water Management Project (FWMP) whose implementation begun in 1992 was then experimenting – under then existing constraints – the degree of farmers involvement in water management at the level of secondary canal. The main objective is to improve the living conditions of the rural people at the village level by involving the environmental conditions at both farmers and organization level at the Fayoum Governorate.
1994	The irrigation and drainage Act of 1984 was amended by Law 213 of 1994 to allow the farmers to organize themselves at the level of a tertiary canal the by-laws, however, limited the implementation of Law 213 only in the new Lands, and also were implementable in the old lands if substantial improvement was done on the system.
1994	The Ministry of Agriculture and Land Reclamation (MOLAR) in cooperation with the International Fund for the Agriculture Development (IFAD) established the New Lands Agriculture Services Project (NLASP).
1996	An Egyptian-Dutch Water Management Project started involvement in water management experiment at the secondary canal level.

1998	<p>A Round Table Meeting in Ismailia by stakeholders was held and important recommendations on WUAs came out of this meeting.</p> <ul style="list-style-type: none"> - To support the overall expansion of participating irrigation management in the irrigation system of Egypt. - To encourage establishment of Water User Association in areas not covered previously under any IIP phase, as well as improving the strategies and policies of development in many areas such as completion of remaining IIP "mesqas", development of criteria for establishment of major project sites, establishment of Water user apex organizations, development of main and branch canals, reviewing the current legal ordinances, identification of legal and administration requirements of WUAs; institutional strengthening of IAS, assess and evaluate IIP.
1999	<p>The first meeting of local experts on Water Users' Associations in Egypt under the auspices of the present project was held at the DDC on June 27, 1999.</p>
	<p>Water Policy Programme (WPP) within the framework of the Agriculture Policy Reform Project (APRP) was formulated. The goal is to improve allocation of water resources in such a way that growing water demands can be met and global water use efficiency can be increased.</p>

Annex 7.3 *Format for Recording Research Team Meetings*

Meetings of Research Team Members and Summary of Deliberations

[illegible]

Annex 7.4 Format for Recording Field Visitations and Activities

Field Visitations and Summary of Activities.

[illegible]

Annex 7.5 Terms of Reference of the Consultant

The consultant shall assist the project research team in the analysis on the dynamics of collective action and social organizing as well as on the gender aspects of water management in the rural areas and in the qualitative orientation of the methodology. More specifically, the consultant shall

- a) support the team in revising their interim reports in view of meeting the objectives of the project;
- b) support the team in the integrated input of the different disciplinary strength of research team;
- c) provide the team with support in conceptualizing their first dissemination workshop, planned for October 2nd, 2000, and assist them in the preparation of the dissemination documents;
- d) submit to the Centre a detailed and satisfactory electronic report of the work accomplished by 31st October 2000

Annex 7.6 Itinerary: of Consultant (Shibru Tedla)
(15th September - 5th October, 2000)

15/09	Friday	-	Arrival in Cairo
16/09	Saturday	-	Review of Reports
17/09	Sunday	-	Morning :Meeting with Dr. Dina Craissati.
		-	Afternoon:Visitation - DDC- Orientation
18/09	Monday	-	Morning: Meeting Dr. Sabbah and his research staff.
		-	Afternoon: 14:00 - 15:00 hrs. Meeting Gender Specialist: Dr. Azza Al Bendari
		-	15:00 - 17:00 hrs. Review of Documents.
19/09	Tuesday	-	09:30 - 12:00 hrs. Meeting Sociologist : Prof. Mohamed H. Nawar.
		-	14:00 - 16:00 hrs. Meeting Agricultural Economist : Prof. Mohamed Mohamed Ragga El Amir/Dr. Ali Ahmed Ibrahim
		-	16:00 - 17:00 hrs. Meeting Dr. Alaa Abdel Kader.
20/09	Wednesday	-	10:00 - 12:00 hrs. - Preparing Report outlines - Discussion with Prof. M. Sabbah
		-	15:00 - 17:00 hrs. Meeting Anthropologist: Dr. Doland Cole.
21/09	Thursday	-	08:30 - 12:30 hrs. Workshop Programme Preparation.
		-	14:00 - 16:00 hrs. Meeting Research Assistants. Met Mr.Medhat Abd El Hafez Mohamed (Agricultural Economist).
		-	16:00- 17:00 hrs. Document Review.
22/09	Friday	-	08:30 - 12:30 hrs. Finalizing Workshop Programme
		-	14:00 - 17:00 hrs. Review of Documents.
23/09	Saturday	-	08:30 - 12:30 hrs. Review of Documents.
		-	14:00 - 17:00 hrs. Preparation of Preliminary Report.
24/09	Sunday	-	Morning:
		-	08:30-10:30 hrs. Meeting with irrigation specialist
		-	Professor Samir Ismail
		-	- Meeting with Dr. Dina Craissati .
		-	Discussions based on "Preliminary Report".
		-	Afternoon : Consolidation of " Preliminary Report " based on outcome of discussion.
24& 25/09	(Sunday Night/ Monday Morning)	-	Flight to Nairobi
26/09	Tuesday Night	-	Arrival in Cairo from Nairobi
27/09	Wednesday	-	Working on Draft Report
28/09	Thursday	-	Working on Draft Report and submitting result as input to workshop Presentations; and discussing report with research staff.
29/09	Friday	-	Reviewing of Draft Report based on feedback received from researcher team.
30/09	Saturday	-	Reviewing of Draft Report (Cont'd)
1/10	Sunday	-	Meeting with Dr.Dina Craissati
		-	Pre-workshop Preparations finalized..
2/10	Monday	-	Workshop sessions.
3/10	Tuesday	-	Meeting with Dr.Dina Craissati
		-	Helping on Draft Workshop Report.
4/10	Wednesday	-	Meeting with the Research Team
		-	- Feedback on Workshop
		-	- Submission of Outline of the Next Interim Report to IDRC and DDC
5/10	Leave for Addis Ababa		
By 30/10	Consultant submits report to IDRC – Cairo		